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Some Observations on Bovine Vaginitis with special reference to Control with Silver Picrate Compound

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Bovine vaginitis in its usual mild form causes little alarm to the stockowner. When, however, for reasons as yet unknown, the disease spreads rapidly throughout the herd, the consequent sterility becomes a serious problem both to the stockowner and to the veterinarian. In the literature dealing with sterility, contagious granular vaginitis has occupied a prominent position and various arguments have been recorded as to its specificity, malignancy and importance. Prior to the discovery of the true aetiology of infectious abortion (in 1897) and following the description of granular vaginitis in 1886 by Isepponi, the disease was regarded as of great importance as a causal factor of infertility. Since then various opinions have been expressed concerning the aetiology and association of granular vaginitis with sterility.

Craig in Fleming's "Veterinary Obstetrics" (1930) describes a granular vaginitis ascribed to infection with *Streptococcus vaginitidis*. Wooldridge (1934) describes the condition as one of the causes of sterility in cattle, but draws attention to the fact that it is regarded by some as a manifestation of coital exanthema. The same author points out that the small glandular elevations normally present in the bovine vagina may have been wrongly regarded as a specific pathological condition. Orr (1938) in an extensive study of the disease in Southern Rhodesia established the fact that a contagious granular vaginitis exists *per se*. The ubiquitous nature of the disease and its non-relationship with *Br. abortus* infection were points emphasised by the same author. He also pointed out the difficulty of treatment and the fact that unless this was carried out with care the animal was frequently left infinitely worse. Tutt (1932, 1933) revived interest in the therapeutic approach to the disease by the use of "Paratblattchen." It would appear, however, that even at this date, opinion was not definite on the specificity of the disease. In view of more recent knowledge the association of *T. foetus* with sterility renders the clinical picture more confused.

In Aberdeenshire an infectious granular vaginitis which, if uncontrolled, can lead to a serious herd sterility would appear to be of a higher incidence than is generally believed. In the first three months of this year the disease was observed in 12 farms, and in three of these farms the disease was widely disseminated throughout the herd and associated with sterility.

An investigation into the control of the disease was carried out in a herd of pedigree Shorthorns, comprising six bulls, 64 cows, 15 heifers and 12 calves. In this herd the only animals which appeared clinically free of the disease were the calves.

HISTORY.—No exact date of the onset of the disease was ascertainable, but indirectly there was evidence which supported the belief that the condition had been established about six months. During that time the disease had undergone spontaneous retrogression and recrudescence.

CLINICAL PATHOLOGY.—In view of the fact that some diversity of opinion exists as to the clinical manifestation of the disease it is considered advisable to describe the gross pathology of the condition seen in Aberdeenshire. In the female the disease was found in various stages of activity. In the active stage the vaginal mucosa was profusely covered with small lenticular nodules, dark red in colour and radiating in a linear fashion from the clitoris. A rapidly spreading catarrhal inflammation accompanied the appearance of the nodules, commencing usually in the region of the clitoris and spreading forward towards the cervix. Activity gradually disappeared within a few days when the nodules tended to coalesce. There was usually an accompanying vaginal discharge, white in colour and mucoid in consistency. This discharge was not copious. No febrile reaction was observed in any animal at any time during the course of the disease. In the male similar nodules were observed on the penis and in two instances there was some tendency to bleeding from the preputial sac. No ulceration was observed in either the male or female.

While it is easy to understand the distribution of the disease within the breeding members of the herd the presence of the disease is not so readily understood in the heifers, especially since these animals were in an isolated part of the farm and did not appear to have any contact with the other members of the herd. Again, the calves were in intimate contact with affected cows, yet in no instance was the disease visible in these animals. Until definite aetiological information is forthcoming speculation on this point would appear fruitless.

Over a three months period samples of discharge obtained from the females in this herd were constantly examined. In no instance was *T. foetus* demonstrated. Cultural examination, both aerobically and anaerobically, failed to demonstrate any organism similar to *St. vaginitidis*.

CONTROL.—Orr (1938) drew attention to the disastrous sequelae following douching with various chemicals of therapeutic value and the necessity for strict asepsis in operation. This was observed in the present investigation when, following the introduction of weak Lugol's iodine solution, the disease reactivated in animals which prior to douching were in a quiescent stage. Consequently, "entozon" granules were introduced on three occasions, with five days' interval, and by means of a wide-bore insufflator. Little or no subsidence of the disease in the female stock was observed, but the male stock treated with bougies of the same compound showed rapid quiescence, and in a month's time appeared normal. It was apparent at this stage that the introduction of therapeutic agents by insufflation into the vagina would be more rational than fluid douching. It was observed that by this method there was a greater probability of the chemical coming into more intimate contact with the diseased surface, and being retained there. The use of therapeutic agents incorporated in a fine dispersible powder has proved of value in vaginitis in human medicine (Corbett *et. al.*, 1941). In veterinary medicine the use of silver picrate in bovine vaginitis has been reported by Brown (1942). Folger (1944) described the technique and the good results obtained following the vaginal insufflation of silver picrate kaolin compound. The inhibitory effect of silver picrate in low dilutions *in vitro* to *T. vaginalis* was demonstrated by Shelanski (1936).

The technique adopted in the present investigation was that described by Folger (1944) except that, as it was impossible to obtain a Shelanski insufflator, a De Vilbiss insufflator was adapted by the addition of a 15-inch long brass nozzle of 4 mm. bore with a bakelite tip. The usual type of compression bulb supplied was replaced with a double bellows. In operation the vagina was dilated with a speculum and 5 gm. of silver picrate compound was introduced, commencing close to the cervix and slowly withdrawing the insufflator. The operation was repeated on three occasions with a two-day interval between each insufflation. The compound consisted of one per cent. dispersion of silver picrate in colloidal kaolin. The introduction of this compound produced no local response nor did it appear to stimulate the disease in any animal. Within a week following the last insufflation the disease throughout the herd had become markedly quiescent. A clinical examination of all the animals in the herd a month later failed to reveal any evidence of the disease, and the herd was returning to a more normal breeding programme. It was observed in one or two instances that the introduction of this compound did not interfere with conception, and that in those instances where conception took place soon after the insufflation the disease underwent rapid retrogression.

Throughout the investigation the possibility that other factors might have contributed to infertility was constantly borne in mind. These factors were checked clinically throughout the herd, and five cows were eliminated as being sterile from causes other than vaginitis. The history of 14 animals pre- and post-silver picrate treatment is recorded overleaf.

SUMMARY.—In Aberdeenshire there exists a form of granular vaginitis which is associated with widespread sterility within the herd. In the absence of definite aetiological information, control by vaginal insufflation proved the most successful therapeutic approach. While this disease was controlled in males by "entozon" bougies the insufflation of one per cent. silver picrate in kaolin proved effective in the control of the disease in 79 females. There was no

Cow No.	Age	Vagina	Cervix	Uterus Ovaries	Number of Services Prior to Silver Picrate Treatment	Date of Picrate Treatment	Date of Conception
	Years					1944	1944
1	13	Active vaginitis	Slight cervicitis	Normal	1	May 9, 11, 13	May 27
2	10	Quiescent stage	Inflamed	„	6	„	June 6
3	9	Active	Normal	„	1	„	„ 11
4	8	„	Marked inflammation	„	7	„	„ 11
5	8	„	Inflamed	„	1	„	May 26
6	7	„	Normal	„	2	„	June 8
7	6	Quiescent	„	„	2	„	„ 19
8	6	„	Slight inflammation	„	8	„	„ 26
9	5	„	Normal	„	2	„	May 27
10	4	Active	Marked inflammation	„	7	„	July 19
11	5	„	Slight inflammation	„	6	„	May 29
12	4	Quiescent	Normal	„	5	„	June 9
13	2	Active	Slight catarrh	„	2	„	May 25
14	2	„	Inflamed	„	4	„	June 11

evidence bacteriologically to associate the condition described with a Streptococcal infection.

Acknowledgment.—Our thanks are due to Dr. D. D. Pratt, of the Department of Scientific and Industrial Research, for the preparation and supply of silver picrate.

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EPIDEMIOLOGY OF TRICHINOSIS IN THE UNITED STATES

Recommendation is made for nation-wide control of trichinosis since the examination of 5,313 diaphragms from hospitals in 37 states showed that the disease within the continental limits of the United States is quite uniform and that there is no correlation between trichina infection and sex, occupation, urban or rural residence or social-economic status. Among racial groups, the number of infected diaphragms found was 15·6 per cent. of 4,219 Americans; 23·5 per cent. of 769 foreign citizens; and 28·7 per cent. of a group of 380 Italians and Germans. In persons between 65 and 74 years old, the rate was 19·1 per cent. Live larvae were found in 28·7 per cent. of 855 positive cases and mixed dead and live larvae in 16·6 per cent. The findings of dead larvae in children of five to nine years indicated that larvae may die within a few years after infection. This survey was made at 189 hospitals by the U.S. Public Health Service.—*Veterinary Science News Letter*, abstr., U.S.A. Public Health Reports, May 28th, 1944.

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QUININE SYNTHESISED

"Synthesis of quinine has been achieved by the Polaroid Corporation of Cambridge, Mass.," reports *Veterinary Medicine* in its September issue, and continues: "When war broke out the principal source of quinine, the Dutch East Indies, was abruptly shut off and at the same time the sending of vast numbers of troops into the tropics and sub-tropics increased enormously the need for this anti-malarial drug of first importance. By limiting the use of quinine to the treatment of malaria in both the civil and military populations and by substituting atabrine, plasmochin and other substitutes wherever practicable, a desperate situation has been avoided but a source of quinine without depending upon exports will be most welcome. As yet the synthetic manufacture of quinine is only in the laboratory stage, but there is promise that it may be adapted to commercial production. The raw materials are plentiful and inexpensive but the process of synthesis is extremely complicated."

Small-Animal Practice

A Clinical Discussion*

Major Hamilton Kirk: It is very gratifying to me that the late President and Council of this Society, in their wisdom, thought fit to accord clinical discussion somewhat more importance on the agenda than it usually receives. I regret to say that I have noticed during the last few years a tendency to crowd it out just as though it were not a matter of the greatest importance to the general practitioner who makes his living from his knowledge of clinical matters. I have prepared a few notes, but before I present them I wish to recount two cases.

A colleague sent in a 12-year-old collie for radiographic diagnosis. The animal suddenly went lame a fortnight ago and when I saw the dog it was lame in the shoulder. The owner said that a month previously the dog ran into the garden and chased a cat; it came in lame but they thought nothing of it until a fortnight later when it showed this very great disability. I radiographed it and have brought the film. It shows what I believe to be the early stage of osteo-sarcoma at the proximal end of the humerus, with periosteal proliferation and rarefaction of the cortex; but there is also discernible a fracture right across the bone. I have enquired of the veterinary surgeon if, in his opinion, the dog had broken its leg a month ago or was the condition now revealed the result of rarefaction? The reply was indeterminate and I am now going to ask the Fellows to give me, if they can, their opinion on that point.

The other case has given me a lot of trouble for the last four months during which I have been attending this cat (exhibited). You may have read a report in *The Veterinary Record* some time ago in which I recorded a lesion of the septum in the nose. I looked upon it at first as a rodent ulcer. It ate away the septum of the nostrils and I tried intramuscular vivicillin with intranasal Pennotin. That treatment seemed to do good but the trouble returned. Then I tried painting with triple-dye but that appeared to increase the nasal discharge and the inflammatory appearance.

The trouble started with a bilateral persistent nasal discharge and I began to wonder whether the root cause of the erosion was the continuous scalding as a result of nasal catarrh. Dr. Hare gave me a vaccine (mixed strept. and staph.) and the cat improved very materially; but again the trouble recurred.

It is very difficult to treat any condition in that situation because whatever one applies the cat immediately licks off. I would like to ask if any Fellow has had a case like it and if he has had any success with any form of treatment that I could try. I have written to Dr. Hare for a fresh supply of vaccine, and I am now giving the cat ultra-violet rays for five minutes daily.

Discussion

Mr. S. F. J. Hodgman: He had had a very similar case to the second described by Major Kirk in which a radium pack was applied with success.

Dr. Hare: He thought it was reasonable to think that any surface application was unlikely to be of much value owing to the constant licking. When he saw the cat he formed the impression that the constant irritation of its tongue was causing the wearing away of the septum. Consequently he advised trying to raise the cat's humoral immunity against the primary pharyngitis and catarrh. Did Professor Wooldridge, from his extensive experience, recall any serviceable form of gag or muzzle for such a case? Sir Frederick Hobday, when investigating the surgery of sinusitis in cats, used a gag which he kept on the cat for the first 24 to 48 hours: how did he fix it up?

Professor G. H. Wooldridge: That was with a view to preventing the cat using its claws and it was a method that is employed very commonly by veterinary surgeons now. The muzzle was designed after the shape of a lampshade. That would not help in this case because he thought the tongue was much more likely to be the source of trouble than the foot.

He was reminded by that case of a series of experiments carried out by Dr. W. L. Williams several years ago, in which he used potassium iodide for a long period—a form of internal medication which was efficacious. The condition was being maintained by the surface bacterial contamination and the external irritation by the tongue. He should advise that the affected area should be kept clean and that there should be used an autogenous vaccine combined with a course of very small doses of iodine, such as half to one grain of potassium iodide, for a period.

In answer to Major Kirk's first question—was the rarefaction preliminary to the fracture or vice versa?—he had no hesitation in saying that the fracture was not the primary thing. There was

* At the meeting of the Central Veterinary Society held at the Conway Hall, W.C.1, on Thursday, October 12th, 1944.

no evidence of callus which would certainly be in evidence before rarefaction occurred.

Major KIRK: What seemed to disagree with that view was the fact that a month ago the dog, although then perfectly well, rushed into the garden and came in lame. Obviously it had had an accident at that moment but no particular notice was taken of it. He himself thought the blow then sustained might have been the progenitor of the malignant trouble.

Professor WOOLDRIDGE commented that the accident and bruising of the shoulder were purely coincidental with the bone lesion.

Captain T. L. WRIGHT said that some years ago he had a case of osteo-sarcoma in a mastiff with a history that some time previously it had crashed into a tree and was very lame. There was no visible injury, but within a month there was a growth: there was no suggestion of a fracture.

Major KIRK: He had one case which attained the size of a tangerine within one week: that was a very rapidly growing malignant tumour—an osteo-sarcoma.

Dr. HARE: It seemed to him, from the radiograph, that the condition was not sarcoma but osteo-myelitis. No spiculation could be seen.

Major KIRK: There was definitely new bone tissue. If the President would look at that again he would see something like a second strip of new tissue.

Dr. HARE: The point could be settled by the use of the hypodermic needle, or some of the tissue could be taken for biopsy. Supposing the suggestion that it was a case of osteo-myelitis were acceded to, could they hope to cure it?

Dr. EDWARDS: Yes; the condition was now commonly treated, he understood, in human surgery. The surgical treatment of osteo-myelitis, however, had undergone much drastic revision with the advent of the sulphonamides.

Major KIRK: Some two months ago he sent for publication a small article which was finally called "Osteo-myelitis of the malar bone in a cat." He removed the lot and treated it as it should be treated, and sent the animal home with a proper dressing. It came back again with his dressing still on and it was a putrid mass: of course the dressing should have been removed.

Otitis Media

Major KIRK: First I thought we might profitably discuss the dog's ear. I have been in the habit of saying there was no danger of puncturing the drum because the meatus is curved, and the drum deep behind a recess. But there is probably some mistake about this, as recently I went deeper into the question by cutting off the concha from the head of a dead greyhound. The external meatus showed as a small circular hole at its junction with the bony surface, and the canal appeared to proceed directly in, in a straight line. It was impossible to follow it further, or to see the tympanum.

I doubt whether many of us trouble to study the intricacies of the ear in detail, and the question occurs to me: Do dogs and cats suffer from otitis media, *i.e.*, inflammation of the middle ear, and medial to the tympanum?

The question loomed up in importance a fortnight ago when a colleague sent a cocker to me for removal of a barley awn. The owner gave a history that she saw the barley awn go in over four weeks ago. The dog shook its head continually. My colleague made three attempts to extract it without success. Meanwhile the dog was becoming frantic with pain; the head was permanently lowered to the affected side; there was heat about the head and a tendency to move in a circle. No peace or sleep were possible and loss of appetite was complete.

I at once nembutalised the dog and by means of spatulae, curved scissors and protected forceps, held away all cartilaginous prominences until the meatus was exposed to a good light. The canal was gently scooped out and a small quantity of semi-powdery semi-pasty grey debris was removed. This was not any part of a barley awn and no such foreign body could be seen.

I fancied there might be pus behind the drum, but did not dare to attempt to puncture it—even if I could. I believed the case was otitis media, and relied upon subduing the pain and irritation, also the hyperaemia, by frequent forcible administrations of almond oil containing benzocaine 10 per cent., and adrenalin. If the pain and nervous phenomena were not relieved, the owner was instructed to give big doses of sulphapyridine for three days—a total of eight tablets daily. This was apparently successful, as the owner sent word five days afterwards that all symptoms had gone.

Would any member give an opinion as to the wisdom of puncturing the tympanum?

Discussion

Dr. INNES: A dog was sent in as a case of hysteria and on examination the animal was found to have a barley awn right up against the drum. There was no pus.

Major KIRK asked how far in was the drum? Could one see it?

Dr. INNES: There was no long bony meatus in the sense that there was one in the horse.

Major KIRK commented that the bony meatus was about an inch or inch and a half long in the dog. In searching for the foreign body he was afraid to go any further than he did. But, as he felt convinced there was pressure of pus behind the drum—should he have gone any further? Should he, in fact, have punctured it?

Dr. HARE: Major Kirk had posed a very difficult question. The full clinical history of the dog had not been disclosed. Otitis media in the dog was, in his experience, uncommon and was almost invariably secondary to inflammation of the tonsils. Pus in the middle ear as in the human being must be very rare indeed, but that slight inflammatory exudate could be formed was certain from *post-mortem* examinations of dogs. What one did commonly see in the dog was tonsillitis and pharyngitis extending to the external ear. The discharge was a mixture of desquamated epithelium, serous exudate and wax. A difficulty to the clinician was when such cases were complicated by parasitic infection of the external ear. He did not think that the "foreign body" suggestion was of much significance. Sulphonamide treatment would have done a great deal towards slaughtering any streptococci which were in the blood stream or the lung.

Major KIRK: The owner was instructed that if the condition of the dog was not improved with his local treatment within three days, she was to start a course of sulphapyridine. The condition had improved, however, and so she did not do so. He concluded that there was internal pressure upon the drum, and he was asking them if he should have punctured the drum.

Dr. INNES: He did not think there was much to go upon as far as clinical diagnosis was concerned. He himself had had otitis media and the pain was excruciating. If the surgeon did not puncture the drum, the drum would rupture itself and that was when the pain went. In rats, middle ear disease was very common, and he thought one could never stop them going round in circles and holding the head to one side. As Dr. Hare had said, he thought that the mere presence of a foreign body outside the drum meant nothing. As Dr. Hare had said also, most of the infections of the middle ear came through the Eustachian tube and the chances were that the Eustachian tube was inflamed as well.

Professor G. H. WOOLDRIDGE: In some of these deep-seated external otitis cases surgical operation was effective. If the middle ear was involved in the case put before them by Major Kirk, it would be secondary, and not due to primary irritation of the tympanum by foreign body.

Distemper Immunisation

Major KIRK: The next question will interest a number of you, and it concerns distemper immunisation.

In spite of the care I always exercise to make sure that an animal is fit to be inoculated, I have experienced an unusual proportion of failures in recent months. I use, generally, the vaccine-virus method with a two weeks' interval, and the breakdown has been in connection with attacks of distemper at a later date (say from one to four weeks after the second injection). Worse still is the fact that the attacks have been of the nervous type so rarely curable. The virus certainly seems to fasten upon the C.N.S. and vaccine is unable to prevent it. Of course I am aware that some of the catarrhal attacks may not be true distemper at all, but only a bronchisepticus infection.

I always have looked with disfavour upon the immunisation of dogs which live in a community such as in greyhound kennels, for it is certain that one or more strains of distemper virus are continuously endemic in the building and in their inmates. Particularly is it dangerous to inoculate newly arrived youngsters in such circumstances, and one only has to talk to the trainers and to greyhound owners to hear their adverse criticism of the process. In fairness I must say that ever since the inception of the "Field" distemper products, I have had something like 95 per cent. of success; but that was in private practice.

The cost of the material just now is very high; it is difficult and sometimes impossible to obtain, and the results are not so certain. Perhaps someone present can suggest a reason for this. Practitioners have asked me if I know of an alternative. Well there are one or two laboratories in America which regularly advertise distemper immunising products, but I have not as yet tried any. They, also, might be difficult to obtain in war-time.

After the war, when people are buying and breeding dogs, we may be called upon to immunise a great many more than we can visualise at the moment.

Discussion

Dr. EDWARDS: The problem was an extremely complicated one—far more complicated than the practitioner often suspected. There were liabilities to untoward sequelae from certain inherent

defects in the vaccine-virus method, as there were, it should be added, in the serum-virus method. Both in principle were meant to evoke an active immunity, which was lifelong, as the result of the establishment of a mild non-clinical infection. The main defect was that such a desirable reaction was only achieved with much difficulty, by balancing the ingredients of the successive inoculations. If one took the vaccine-virus method, one had several unstable and fluctuating factors operating in the antigenic ingredients of the two inocula which complicated the result.

First of all, and most essential, the virus itself. The distemper virus was a fragile virus, and the problem of obtaining, in work of this sort, a virus, for use at the time of inoculation, of dependable viability and virulence, was a very difficult one. Since the recent methods of satisfactory freeze-drying and putting up of these desiccated fragile viruses in a complete vacuum had been evolved, a good deal of success in attaining stability had been achieved; but he would not, from his experience, be assured that any of these preparations purporting to contain a live virus were dependable until he had tested them for their activity on a normal dog that had not been vaccinated beforehand. When, however, one was issued with an ampoule stated to contain live virus and one met with misadventures after inoculating it, such as Major Kirk had reported, one felt that some means should be devised for testing whether the product one had received was really alive. One practitioner of his acquaintance always inoculated his puppies with what was stated to be the live virus first and waited to see if there was afterwards a temperature reaction, reserving the serum obtained for possible later use when he saw that there was evidence of the material received as live virus proving infective. The vaccine again might be too weak, as an inactivated antigen, to arouse the basic immunity required against the really live virus, or, what was almost worse, it might be too strong, and in that case the live virus would not be enabled to obtain the desired foothold in the tissues. It was not altogether simple or easy to adjust the balance between the preliminary basic immunity to be set up by the inactivated antigen and the degree of infection arising from subsequent inoculation with the live virus.

Distemper, he felt, was one of those diseases which was accepted as solved far too quickly—not like foot-and-mouth disease in which they kept on realising difficulties. The products were planted quickly by the eminent laboratory workers who undertook the initial laboratory work on to a manufacturing firm for exploitation, who immediately encountered difficulties when they came to use these products in the field—difficulties of the kind which those of them who had had experience in the need always to attune the course of laboratory investigation to the supreme test of adequate field trial only too well appreciated. First the vaccine alone, in single or double injections; that failed. Then the vaccine-virus came in and that was showing difficulties. The serum-virus was held by some to be very much better, but the serum again might, like the vaccine, be of too low or too high potency, in relation to the activity of the virus. Various expedients had been tried, such as inoculating the virus one or two days before the serum, and even to wait until there was a commencing rise of temperature before inoculating the serum. These expedients meant taking some risks and very close vigilance on the part of the practitioner, so that satisfactory distemper immunisation ought always to be regarded as something much more than the perfunctory inoculation under the skin of two different materials at an arbitrary interval.

He thought a great deal more research needed to be done on distemper immunisation and the records of large-scale trials then published so that they might be scientifically analysed.

Mr. Mackenzie: Might not Major Kirk's trouble be that he had protected against some of the strains of distemper but not all of them?

Dr. Edwards: Fortunately, in distemper there was not the multiplicity of strains that they knew existed in foot-and-mouth disease. But during the last ten years or so a growing suspicion had arisen that there was more than one type, and one type that was marked from some of the fur-bearing animals seemed immunologically different from the classic type.

Major Kirk: He thanked Dr. Edwards and, in reply, would point out, firstly, that it was quite impracticable for people in private practice to test out virus in puppies before one gave one's inoculation. Secondly, the tragic part was that distemper met with so frequently following vaccination was of the nervous type, which he should say was almost 100 per cent. fatal.

Mr. T. L. Wright: The nervous type of distemper almost always came out in the later stages, when the animal had practically recovered from the original respiratory and alimentary disturbances. It would seem that the partial immunity resulting from the virus encouraged that virus to settle in the nervous system.

Dr. Innes: When Laidlaw and Dunkin did their initial experiments they did not carry out any work on the encephalitic type of distemper. There had been some work in the U.S.A. by Pappenheim but using a "street" virus. This produced an acute encephalitis, nothing like disease you met with in the field. He himself had examined the brain tissue of about 80 dogs suffering from the so-called nervous form of distemper, and had inoculated infected tissue into ferrets, but in no case did he recover the distemper virus. In all these dogs the history of occurrence of the nervous form after some previous febrile illness (distemper) varied from something like one month to one year. There were five different pathological forms: (1) acute disseminated encephalomyelitis; (2) chronic demyelinating encephalomyelitis; (3) lymphatic meningitis; (4) a type of vascular encephalopathy—like Wernicke's in man; (5) in many dogs examination of the brain tissue revealed no abnormality whatsoever. He had tried, as had many others, to set up encephalitis by direct inoculation of brain tissue by distemper virus, but was never able to do so. He produced distemper, perhaps, but not encephalitis.

Dr. Edwards: An extraordinarily common disease of horses at one time in India was kumri, which showed all grades of morbidity, of the various types described by Dr. Innes, but on inoculation into horses of material taken from a long-standing clinical case, one could not set up the disease. It was now thought to be proved that the nervous symptoms and lesions in that kind of disease were really the sequelae of an earlier virus infection, the virus infection having entrenched itself in the central nervous system, and then, later on, by the time the disease had become manifest by the establishment of lesions no virus was recoverable. So they need not be thrown off the track by the fact that the pathologist failed to find the distemper virus in some of the forms noted by Dr. Innes. The clinician was perhaps right in suspecting all these cases to be really sequelae of distemper, and in the cases Major Kirk had described he could not rid his mind completely of suspicion that the vaccination against distemper had really been at fault.

Major Kirk: He did meet and hear of such a number of people who were really afraid of inoculating dogs against distemper that he feared that the method had fallen into partial disuse: it was rather lamentable.

AGRICULTURAL EDUCATION

Addressing the Jubilee meeting of the Agricultural Education Association, Mr. R. S. Hudson, Minister of Agriculture, referred to the facts that legislation has been passed providing for the establishment of a unified National Agricultural Advisory Service, and that two Committees have been set up, both under the chairmanship of Dr. Loveday, which have the responsible task of shaping the future of agricultural education in the years to come. He was anxious to get the new service started as soon as possible. The Ministry had already made a beginning by appointing Professor Scott Watson to the head of the service and by filling several senior posts at headquarters. These three men would be largely responsible for working out a detailed scheme. He hoped, too, that Professor Scott Watson's appointment would be reassuring to those who had had qualms that a State service would not provide a really worth-while career.

There were some who thought that the division of responsibility for advisory work and for agricultural education at the farm institute level and below would create an insoluble problem. It was not going to be easy. What they had got to try and do was to dovetail those two services and make them fully complementary. A good advisory service was not a substitute for education and must fail if there was not an efficient system of education. If agriculture was to be progressive, if farmers were to be in a position to take advantage of the latest scientific developments, then they must see that they got into the industry men and women trained and educated in the science of agriculture. It would be the job of the advisory service thereafter to keep them up to date.

"I am so anxious about the great scarcity which exists to-day of good technical men," concluded the Minister. "There is a great gap to be filled before we can satisfy the demand that there will be for men to carry out the jobs that face us after the war. We must have men for the advisory service; men to teach the older students at the universities and colleges; men to teach the younger students at the farm institutes; men to instruct the large numbers of ex-Servicemen and women whom we are going to train when the war with Germany is over; men to staff the research stations, etc. Men with an expert agricultural training will also be wanted by commercial firms, by the Colonial Agricultural Service and in other fields. It means, therefore, that for a time we may find it difficult to push on as rapidly as we would like with all the plans that we have in mind. For first we shall have to teach the teachers. It means, too, that there will be great scope and opportunities for those of you already trained for this work and for those who elect to take it up as a career during the next few years."

CLINICAL COMMUNICATION

Poisoning of Cattle by Dog's Mercury (Mercurialis annua. L.)

N. S. BARRON,
The University, Reading

History.—A mixed batch of Shorthorn heifers and cows, reared on the same farm, were moved to a rough pasture which had not been grazed by any stock for many years. A week later one animal died, followed shortly by another.

Symptoms.—Both heifers and cows were affected. The temperatures varied greatly, sometimes sub-normal, though mostly raised. The first sign of illness was a lassitude which was progressive. Affected animals would lie down and only move about reluctantly. When this occurred they frequently urinated, the urine varying in colour from a pale pink to a dark coffee-colour. The dung was fairly normal. The most remarkable symptom was a striking anaemia, the mucous membrane of the buccal cavity, gums and conjunctiva, being dead white. In a few cases jaundice was present.

Post-mortem Examination.—Two animals were examined *post mortem*. In both instances, the entire carcase was of a deep yellow colour. Otherwise there was little to be seen, though the bladder was distended with magenta-coloured urine and the spleen, though of normal size and shape, contained a very tarry parenchyma. In one animal a few petechiae were found on the heart.

The urine, when poured into a measuring cylinder, retained an even colour throughout, with practically no deposit.

Discussion.—The pasture into which the animals were originally turned, consisted of a long meadow of a very poor rough sward separated from the road along one side by hazel, elder and scrub bushes. Along the other side the ground rose steeply the whole length to about 100 feet. This area was for the most part sparsely covered with small trees and undergrowth of the same flora as the road fringe. Several acres were, however, covered more heavily with oak and ash, and here sorrel, bracken and spurge of the more open area gave place to a heavy mat of Dog's Mercury (*Mercurialis annua*).

Bearing in mind the type of grazing and the symptoms, and prior to a very detailed examination of the field, a tentative diagnosis of piroplasm redwater was made. Although no ticks were observed on the animals, this seemed at the time a possible explanation of the very sudden symptoms. Accordingly two animals were injected at once with "acaprin" and both recovered. Of the remainder, both affected and normal animals were injected when a further supply of "acaprin" was procured. Nevertheless, several animals died. All animals were, however, moved from the pasture prior to the first injection.

In the following weeks the case was further considered and the literature explored. The suggestion was put forward about this time by Mr. G. W. Searles, of Alresford, that Dog's Mercury was the probable cause of the trouble. With this in mind, the pasture was revisited and explored to its limit. The Dog's Mercury under the trees was found to be very heavily grazed. The remark originally made by the stockman that the cattle had been on the ground for a week before the deaths occurred and that it was about this time that they started to go up the slopes to graze, suddenly assumed importance and lent support to Mr. G. W. Searles's view.

The clinical symptoms resembled those described by Lander as due to the action of *mercurialine* the active principle of *M. annua* or *perennis*. The striking nature of these lesions, and the circumstances of the case were such that there seems sufficient justification for recording this case.

The evidence would seem sufficient to regard this case as poisoning by Dog's Mercury.

DUST-STORM DAMAGE IN AUSTRALIA

Dust-storms, which have lately been sweeping the dry areas of New South Wales, Victoria and South Australia, have done widespread damage, reports *The Times* Correspondent from Canberra, who adds: "In northern Victoria they have left a deep layer of sand, blocked the irrigation channels, damaged grapes forming on the vines along the Murray River, and generally intensified the devastation wrought by the long drought. In the far west of New South Wales experts say that it will take many years to restore the pastures, particularly where the constant wind-storms have eroded inches of the top soil.

"It is being increasingly appreciated that these dust-storms are warnings of a disaster which will overtake thousands of Australian producers if their lesson is not heeded. They are the direct results of the careless use of soil, the reckless destruction of timber, excessive grazing, over-cropping, and unskilful ploughing."

ABSTRACTS

[Mortality of Mammalian Young with Possible Nutritional Causes. Morris, M. L. (1944.) *J. Amer. vet. med. Ass.* **105.** 80-82.]

It is well recognised that there may be a high mortality amongst the newborn of several species of mammals for which no adequate cause can be found. It is possible that some as yet unknown nutritional deficiency of the mother's milk may account for some of these losses. The picture as seen in the foal and calf is of the young animal born alive, fully developed, but weak and unable to stand and suckle. Those that are able to suck may do so for a few days and then weaken and die. On *post-mortem* examination there are no visible lesions. Amongst pigs, very early mortality of this type results in considerable losses to the swine industry. The causes have been attributed by various investigators to mineral and protein deficiencies in the ration of the sow, but it has been found that mortality in the young pigs may occur even when the ration contains sufficient nutrients in the form of protein, carbohydrates, fats, minerals and the *commonly known* vitamins. Mortality of the newborn is also of frequent occurrence in dogs and foxes, despite the fact that the brood bitches receive a diet known to be adequate for adult dogs and even for the maintenance of gestation.

At one time it was thought that losses amongst the newborn and in the suckling period might be prevented by including good quality protein in the dam's ration, but the author has obtained evidence that neither protein quality nor quantity is the sole aetiological factor. Studies of the blood of pups dying as a result of an apparent deficiency in the milk of the dam have revealed a fall in the number of r.b.c.s (to as low as 1·5 to 2·5 million per $mm.^3$) and a drop in Hb (to 7·5 grammes per 100 c.c.). This suggested that the cause of death was related to the absence of a haematopoietic factor(s) in the milk of the dam. In the case of one affected litter the results obtained, both in resumption of growth rate and restoration of the normal blood picture following frequent injections of a liver extract, were highly satisfactory. (It seems, however, that all liver extracts may not contain the haematopoietic factor, for another litter of anaemic pups failed to show any response to treatment with a new batch of liver extract.) Folic acid concentrate administered parenterally also produced a marked rise in r.b.c.s and in Hb, whilst pyridoxine hydrochloride given subcutaneously to anaemic pups produced a rise in the number of r.b.c.s.

Since certain foods which contain no liver are known to provide adequately for all phases of reproduction and growth, liver cannot be the only source of these essential factors. A study of the normal rations fed to breeding pigs and to other animals suggests that the necessary factors (vitamin B complex) which prevent mortality in the newborn are probably present in wheat offals in adequate amounts, but are absent from maize and its by-products. Oats, whilst containing the factors required for lactational sufficiency may not be too rich a source of these, and it is suggested that for horses and cattle an adequate ration should contain at least 1,200 lb. per ton of a combination of the whole grain of wheat, maize, oats and barley and also a good quality lucerne meal.

The author stresses the complexity of the problem, and emphasises the need for further research into the normal blood picture of suckling animals as well as investigation of the dietary factors involved in the mortality of the newborn caused by possible insufficiencies in dam's milk.

N. J. S.

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[Control of Scabies by Use of Soap Impregnated with Tetraethylthiuram Monosulphide ("Tetmosol"). Gordon, R. M., Davey, T. H., Unsworth, K., Hellier, F. F., Parry, S. C., and Alexander, J. R. B. (1944.) *Brit. med. J.* No. 4354, pp. 803-806. (Issue of June 17th.)]

It has been shown that tetraethylthiuram monosulphide (tetmosol) retained its sarcopticidal properties when combined with soap in 5, 10, and 20 per cent. dilutions. With rat scabies due to *Notoëdres*, the daily or weekly use of this soap cured the local infestation in some cases and reduced the mite population in others. Six men were completely freed from *Sarcoptes scabiei* after receiving five or six baths with 20 per cent. tetmosol soap on successive days. When a further 110 men received three baths with 20 per cent. tetmosol soap over a period of a week and remained under observation for at least six weeks, it was found that, at the end of this period, 88 (80 per cent.) had been cured of scabies and the remainder had relapsed. The simplicity of procedure suggests the possible value of tetmosol soap for therapeutic use in communities in which disorganisation as a result of war makes it impracticable to use the standard methods, although this soap is unlikely to supersede any of the standard treatments for scabies.

The protective value of tetmosol soap was tested by washing the tails of clean rats heavily exposed to *Notoëdres* infection from their companions. When washed once weekly with 5 and 10 per cent.

tetmosol soap there followed a marked reduction in the number of mites developing in the skin as compared with controls washed with unmedicated soap. When 20 per cent. soap was similarly used two rats were completely protected over 22 days and the third rat developed only a very light infection. In contrast to partial protection by weekly washing, regular use of 5 per cent. tetmosol soap twice daily gave complete protection to the treated area over periods of 25–36 days (the duration of the experiment) whereas little or no protective action followed the use of unmedicated soap.

The authors believe that, from the results obtained, the generalised use of tetmosol soap in a community would reduce the incidence of scabies by sterilising some existing cases and by destroying the mites on freshly invaded persons. Such generalised use, however, will only be possible if it is found that a high incidence of dermatitis does not follow prolonged use of the soap. It was found that the incidence of dermatitis following its use for short periods was low, and that it was also low amongst a small number of persons tested over a prolonged period. No estimate, however, can be made of the risk without more extensive trials. J. N. O.

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[Studies on Brucellosis of Swine: 1—Infection Experiments with Weanling Pigs. Hutchings, L. M., Delez, A. L., and Donham, C. R. *Amer. J. vet. Res.* **5**. No. 16. (July, 1944.)]

The authors review the results of various experiments on infection of swine by *Brucella suis*, and 21 references are quoted from American and Canadian sources, with one Scandinavian translation.

Sixty pigs were divided into six groups of ten each, and exposed to massive doses of a polyvalent suspension of *Br. suis* by six different routes. Litter mates were run at random in various groups. Six different strains of *Br. suis* were used in the polyvalent inoculum, the cultures being obtained from three U.S. Agricultural Experiment stations. Prior to their use for pig inoculation, each of the six cultures was injected subcutaneously into two guinea-pigs to determine its virulence. Ten other pigs were kept in a group as controls, and as a check on a possible spread of the infection. The routes chosen for infection were per rectum, os, conjunctiva, vagina, prepuce, subcutaneous and intravenous. Tables are given showing the results of exposing the weanling pigs to *Br. suis* by the various routes mentioned.

A high proportion of the animals were readily infected at weaning age, as determined by agglutination and bacteriological results, and on this point the results disagree with those of several previous investigations which have led to the common conception that such pigs are not readily infected artificially with *Br. suis* organisms.

The results also indicate that the agglutination method as now employed for brucellosis in swine, is adequate as a herd diagnostic procedure, but may not be sufficiently reliable as a basis of diagnosis in individual swine. Gilts infected with *Br. suis* as weaners at about twelve weeks of age, carried their pigs to full term in their first pregnancies. *Br. suis* was not recovered from them o: the tissues of some of their newborn pigs at the time of parturition. D. J. A.

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[Effect of Diet, etc., on Susceptibility to *Salmonella suipestifer.* Gwatkin, R., and Moynihan, I. W. (1944.) *Canad. J. comp. med.* **8**. 66-79.]

In view of the widespread tendency to associate outbreaks of necrotic enteritis with piggery management the authors planned and carried out experiments in an attempt to establish more accurately the influence of certain diets and certain gross physical conditions, on the disease.

Having obtained a pathogenic strain of *S. suipestifer* capable of producing clinical symptoms, the authors divided their pigs into the following groups, leaving suitable controls and proceeded to infect these by mixing cultures in the food. The progress of infection was checked by repeated blood agglutination and faeces-cultivation tests. The individual groups received: (1) A basic ration consisting of equal parts oat, wheat and barley chop, 1 per cent. NaCl plus (*a*) 1 per cent. limestone, (*b*) 1 per cent. limestone and 10 per cent. swill, (*c*) 5 c.c. "feeding oil" daily, (*d*) 1 oz. dried brewers' yeast, (*e*) 100 mg. nicotinic acid, (*f*) 1·5 gm. iron sulphate, (*g*) variable quantities of sod. hydroxide, as this seemed to be beneficial in the field in curtailing outbreaks. (2) The basal ration fed in (*a*), (*b*) and (*c*) was replaced by corn meal. (3) A basic ration plus 10 and 15 minims of croton oil *or* 200 mg. of red squill per lb. b.w. (4) A basic ration plus variable amounts of soya bean meal.

Results.—In all four experiments infections were transitory and *S. suipestifer* soon disappeared from the faeces. Chilling and the production of gastro-intestinal irritation (Experiment 3) failed to render the ails susceptible. These experiments support the view that *S. suipestifer* plays the role of a secondary invader and the conditions created by feeding under experimental conditions, diets commonly used, do not seem capable of creating the necessary environment for ts establishment. N. S. B.

REPORT

[Kenya Colony and Protectorate: Report of the Veterinary Depart ment for 1943.]

An exceedingly difficult year for all branches of the livesto industry is recorded in the annual report for 1943 of the Veterinar Department of Kenya. The acute shortage of all cereals an starchy foods due to the failure of the rains, led to reductions i the output of dairy produce. Stockfeed had to be closely ration and, despite the use of every kind of substitute food, a large numb of bacon pigs had to be slaughtered as porkers, dairy cattle suffere from the lack of a well-balanced ration, and the mortality amon sheep on many of the larger sheep farms was heavy, many ew being kept alive only by means of large issues of oil-cake. In th native pastoral areas large numbers of cattle died both from th effects of the drought, and from trypanosomiasis contracted i riverine fly areas not normally used to graze cattle.

Despite these troubles, interest in the future of stock farming wa maintained during the year. The Cattle Breeding Association i Tarns-Nzoia records a total of 475 cows inseminated in less tha eight months, and a second Cattle Breeding Association was forme in the Limuru District.

With the co-operation of the Live Stock Control, the Departmen imported and issued—mainly as foundation stock—to small farmer about 1,400 Boran and Serenle cows and heifers. There was kee competition for these animals and collection was started in Somali on a second larger batch.

Masai Accept Inoculation.—No fresh outbreaks of animal disea on a large scale were reported during the year. Mass immunisation against rinderpest were continued in the Native Reserves, and a the Masai were at last won over to accepting universal inoculation a solidly immunised deep belt stretching along the Tanganyik border from the Lake to the Coast was achieved during 1943. Th immunisation of more than two-and-a-half million head of catt in 1942 and 1943 is reflected in a striking reduction in the incidenc of the disease in the treated areas. During the year in the Nativ Reserves, only one small outbreak was reported from Sout Kavirondo, one from North Kavirondo, and two from Central Kavi rondo. In the Nyeri, Embu and Meru Reserves there were altogethe four outbreaks. These were the reserves in which an almost com plete cover was obtained in 1942 mass inoculations

No serious new outbreaks of contagious bovine pleuro-pneumoni were reported during the year, and an arrangement with Tanganyik regarding the simultaneous inoculation of cattle in infected area along both sides of the border, was put into effect towards the en of the year.

No fresh extensions of active dispersal of tsetse flies are recorded though there was a good deal of wastage from trypanosomiasis i the Native Reserves. The problem is most serious in parts o Central and South Kavirondo and the Machakos and Embu Reserves and it will be one of our most urgent post-war tasks to restore th position in these areas. One unit of the Tsetse and Trypanoso miasis Survey was in operation during the year.

Disease in Settled Areas.—Giving details of stock diseases in th settled areas of the Colony, the report records 58 fresh outbreaks o East Coast fever in the "clean areas" and 13 only of rinderpest as against 53 in 1942. Owing to prompt measures taken, mortalit was light in both these diseases.

Trypanosomiasis among cattle is still prevalent in certain of th settled areas, particularly Lower Narok and Kirimun. In the Sola and Sabukia valleys, the main fly barrier was completed during th year and bush clearing was begun on the farms. No cases o trypanosomiasis were reported in these valleys.

Foot-and-mouth disease of a mild character occurred in mos settled districts and sporadic cases of anthrax and blackwater were diagnosed in all districts, but outbreaks were quickly suppressed by vaccination.

Animal Husbandry.—Under the heading "Animal Husbandry," the report again stresses difficulties due to the unfavourable weathe conditions of 1943. As an example, for the three Kavirondo Reserves, the total production of ghee was 3,232 tins, compared with 8,165 tins in 1942, which was also a poor year.

The Pig Finishing Station at Nyeri was forced to operate on a reduced scale and the report mentions that this station has handled 8,802 pigs on behalf of the Kikuyu since it was opened in 1940. During the food crisis, the station was used as a means of preserving some of the best pure-bred blood from European farms.

At the Mariakani Centre, 215,466 gallons of native milk were treated prior to its distribution in Mombasa, and about 36,000 gallons were inspected at the Likoni ecntre. A pasteurising plant was constructed from odd pieces of laboratory sterilising plant and an old ammonia compressor. This plant proved that native milk

MEMOIR

Lt.-Colonel JOSEPH WILLIAM BRITTLEBANK, C.M.G., M.R.C.V.S., D.V.S.M. (VICT.)

By the death of Lieut.-Colonel J. W. Brittlebank, which is announced with deep regret elsewhere in this issue, the veterinary profession has lost one of its ablest and most vigorous members, and one who did a great deal to raise the status of the profession in the eyes of the general public.

Born in 1876 and educated at Leeds Grammar School and the Royal High School, Edinburgh, he graduated from the New Veterinary College, Edinburgh, in 1897 at the age of 21. In 1898 Brittlebank was appointed Professor of Veterinary Science at the Royal Agricultural College, Cirencester, where he remained for two years. Following a short spell of general practice he was selected in 1901 as Veterinary Officer to the Corporation of Manchester. Thus began a period of public health service which lasted nearly 30 years and which made Manchester the pioneer city in milk and dairies work in this country, and earned for Brittlebank a reputation second to none in this branch of veterinary public health work. Indeed it would be true to say that the system evolved by Brittlebank in Manchester many years ago is now being recognised in the recent Government White Paper on Milk as being the best method of ensuring a clean and wholsome milk supply to-day.

For many years Brittlebank collaborated with the late Professor S. Delepine at the Manchester Public Health Laboratory, working particularly on tuberculosis, and it was largely due to this contact that the post-graduate course of D.V.S.M. (Vict.) was started, Brittlebank being an original mover for the foundation of the course.

On the political and social sides of the profession Brittlebank was always an active member. He served the Lancashire Division of the N.V.M.A. for a long period, occupying the presidential chair for two years and acting as Hon. Secretary for three years. He was also Hon. Secretary of the parent body for three years. His work on the Council of the R.C.V.S. is well known to the profession generally. First elected in 1914, he had served without a break until his death, and for several years he was Chairman of the Parliamentary Committee. He became President in 1926-27 and took a leading part in negotiating the Veterinary Surgeons Act with Eire, handling this somewhat intricate problem with great tact and dignity. His re-election to the office for a second term the following year showed the measure of appreciation which his colleagues had for his ability as President.

Brittlebank's name will always be associated with the benevolent organisations of the profession, the work of which he had so deeply at heart. He was the reigning President of the Victoria Veterinary Benevolent Fund, a position he had held for many years. He was also a member of the Council of the National Veterinary Benevolent and Mutual Defence Society over a long period, and held the Hon. Secretaryship for seven years.

He had acted as external examiner for numerous bodies and had also held the office of Vice-President of the Royal Society of Medicine. In fact so prominent had Brittlebank's name been for so long and in so many fields of activity that it will surprise many of his acquaintances to learn that he was still two years short of the "allotted span."

In the first World War Brittlebank served in the R.A.V.C. from 1914 to 1918, and his powers of organisation were recognised by his promotion to the position of A.D.V.S. Western Command, with a Lieut.-Colonelcy and the award of the C.M.G. in addition to being twice mentioned in despatches. After the war he returned to Manchester, and one of the positions in which he took great pride and pleasure was that of Chairman of the Manchester Corporation Ex-Servicemen's Association, which he held until he left the Corporation service in 1930 to take up a position with a dairy firm. This work did not prove congenial and in 1935 he went into general practice in Hertfordshire.

Colonel Brittlebank was one of the finest speakers in the profession. His command of the English language was exceptional and this, combined with his power of quickly appraising the salient points of a subject or discussion, made it a pleasure to listen to him. He had a dry wit plus the ability to be scathing on occasion, which made him a redoubtable antagonist in debate. A born leader, he expected loyalty from his subordinates, but he knew how to be loyal in return.

He married twice, his first wife being a daughter of Professor Williams, jun., of Edinburgh. His second wife, who survives him, was the daughter of the late W. R. Davis, M.R.C.V.S., of Enfield.

To Mrs. Brittlebank and her family, in their bereavement, goes the heartfelt sympathy of the whole of the profession.

R. C. L.

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can be rendered perfectly safe and its keeping qualities much improved by pasteurisation.

The herds of native dairy cattle at the veterinary centres are reported as having shown steady improvement during the year. At the Nygong Centre the best performance was a lactation of 423 gallons in 295 days, with a 5·6 per cent. butterfat; cows from the veterinary centres are becoming more and more popular with progressive natives, and according to the report there should be little difficulty in using the progeny of these herds on a vast cattle improvement project in the native reserves.

R.C.V.S. MEMBERSHIP EXAMINATIONS

List of Successful Candidates

(*Continued from page* 503)

Edinburgh

FIRST YEAR:

Corrigall, Wm.	Jones, E. E.
Fawell, E. V.	Kydd, W. J. C.
Galloway, Wm.	Millar, M. W.

SECOND YEAR:

Bruce, I. H. M.	Murray, D. I.
Buie, Andrew	Thomas, W. U.
McDonald, John (H)	Walker, Denis (P)

(P) denotes credit in Physiology.
(H) denotes credit in Histology.

THIRD YEAR:

Cameron, John (A)	Roe, D. M.
Fletcher, R. B.	Slee, Alan (A)
Mather, D. B.	Wharton, M. H. (H)
Morton, P. E. (P)	Wight, P. A. L.
Noble, Claude	Wilkinson, L. (P) (H)

(P) denotes credit in Pharmacology.
(A) denotes credit in Anatomy.
(H) denotes credit in Hygiene.

FOURTH YEAR:

Arnot, C. A. M.	McCartney, W. D. J.
Banks, P. N.	Mackenzie, Finlay
Black, T. S. M.	Rimmer, S. M.
Brown, D. A.	Russell, A. G. M.
Clyde, D. H.	Singleton, W. B.
Gray, G. M.	

FINAL YEAR:

Foster, A. M.	Porteous, A. J.
Gunstone, J. W.	Ross, Alex.
Harkness, B. R.	Salisbury, N.
MacKellar, J. C.	Sim, L. S.
Murray, M. D.	Stewart, James
Pottinger, F. H.	Walker, I. A.

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Liverpool

FIRST YEAR:

Barlow, Miss B. J.	Swire, P. W.
Nicholson, Miss E. M.	

SECOND YEAR:

Curtis, P. E.	Walker, R. J. B.
Shepherd, Edward	

THIRD YEAR:

Davies, Ifor (A)	Ockey, J. H.
Evans, Oswyn (H)	Thompson, R. G.

(A) denotes credit in Anatomy.
(H) denotes credit in Hygiene.

FOURTH YEAR:

Beaumont, W.
Evans, S. D. S.
Highet, D. R.
Hull, P. N.
Kidd, John
Mills, Miss S.
Robinson, F. E.

FINAL YEAR:

Adams, A. D.
Doran, G. F. P. (S)
Edwards, Henry (S)
Humphreys, J. R.
Jarvis-Evans, D. G.
Miller, P. G.
Roberts, T. O.
Thurmand, R. C.

(S) denotes credit in Surgery.

QUESTIONS IN PARLIAMENT

ANIMAL DISEASES (RESEARCH)

Mr. DE ROTHSCHILD asked the Minister of Agriculture whether he has considered a communication from the county council of the Isle of Ely about research into animal diseases, in view of the increased number of outbreaks; and what steps he proposes to take in the matter.

Mr. HUDSON: Yes, Sir. I do not think that research into animal disease problems is at present hampered by lack of funds. The Agricultural Research Council have constantly under review the question of such research, and although the scale of work is to some extent limited by the numbers of trained workers and the facilities available, research is, in fact, in progress into all the major problems in this field.

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UGANDA (CATTLE DISEASES, INOCULATION)

Mr. SORENSEN asked the Secretary of State for the Colonies how many deaths of cattle have taken place during the past year in Uganda; how many of these were due to inoculation and to other causes; whether compensation is paid for losses due to inoculation; and what representations have been made on the subject from Africans.

Colonel STANLEY: Figures of total deaths from all causes are not available. Out of some 400,000 head inoculated so far this year, approximately 28,000 have died, but it is not known in what proportion of these cases death was due to disease already contracted. Compensation is not paid for losses due to inoculation. The Governor has received representations from only three persons in respect of 13 head of cattle.

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SOUTH AFRICA (HORSE SICKNESS, VACCINE)

Sir W. EDGE asked the Under-Secretary of State for Dominion Affairs whether he can make any statement on the claim to the discovery in South Africa of a vaccine which cures horse sickness.

Mr. EMRYS-EVANS: I am informed that for some time a vaccine has been used in South Africa for the purpose of preventing horse sickness. As, however, this disease does not occur in this country, little detailed information is, I understand, available here. If my hon. Friend wishes, my Noble Friend will be glad to make further enquiries.

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JAMAICA (AGRICULTURAL DEVELOPMENT)

Mr. CREECH JONES asked the Secretary of State for the Colonies what progress is being made in Jamaica in regard to the proposals made to the Jamaican Government by Sir Frank Stockdale, his agricultural adviser, in regard to agricultural development.

Colonel STANLEY: During the last year schemes for agricultural development in Jamaica, based on the recommendations of Sir Frank Stockdale, have been approved, involving the expenditure of approximately £2,270,000, of which £1,036,600 will be met by free grants and £240,000 by way of loan under the Colonial Development and Welfare Act and the balance from local funds or by local loan. A further scheme, estimated to cost £427,550, is now under consideration. Generally speaking progress on the schemes is satisfactory, but some delay in the early stages will be caused owing to the difficulty of securing qualified staff.

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CONDEMNED MEAT

Mr. R. DUCKWORTH asked the Minister of Food what is the exact amount and value of meat whlch has been condemned in any one year in Government slaughterhouses; and what proportion of the meat was condemned on account of tuberculosis.

Colonel LLEWELLIN: In the 12 months ending March 31st, 1944, 11,815 tons, worth, had it been fit for human consumption, £715,000. I regret that information is not available in regard to the last part of my hon. Friend's Question.

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BOVINE TUBERCULOSIS (TREATMENT)

Major YORK asked the Minister of Agriculture whether he is aware of the rapid extension of the use of the homoeopathic treatment of tuberculosis in cattle; and whether he will now arrange for tests of this treatment to be made.

Mr. HUDSON: I have no information as to the extent to which the treatment referred to by my hon. and gallant Friend is being used. With regard to the latter part of the Question, there is no scientific evidence of the efficacy of homoeopathic treatment of bovine tuberculosis.

Major YORK: Is the Minister aware that, although there is no scientific evidence, there is great practical evidence of the value of this treatment; and in view of the fact that a very large number of herds in this country are now using it, would it not be a good thing for the Minister of Agriculture to look into it?

No answer was given.

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POULTRY STOCK IMPROVEMENT (ADVISORY COMMITTEE)

Mr. ECCLES asked the Minister of Agriculture whether he is now able to announce his proposals for improving the poultry breeding industry.

Mr. HUDSON: In my statement to the House on December 5th I stated that it was the Government's policy to encourage an expansion of poultry and egg production to the fullest extent permitted by the supplies of feeding-stuffs which can be made available. In order to prepare for this expansion, I am taking certain steps designed to encourage and improve the production of sound breeding stock. These include:—

(1) The setting up of a Poultry (Stock Improvement) Advisory Committee, with the following terms of reference:

"To keep under review the position of the stock producing and distributing sections of the industry, to advise on existing Measures designed to encourage the production of high quality breeding stock, and to suggest from time to time any further steps which they would consider it desirable to be taken to secure that end."

The membership will be announced at an early date.

(2) The assumption by my Department as from April 1st, 1945, of direct responsibility for the accreditation schemes for poultry breeders and hatcheries, a responsibility which is at present borne by County Councils. The advice of the Committee will be sought in regard to these schemes and any further schemes of assistance to breeders and hatcheries which it may be thought practicable to introduce.

LABOUR VIEWS ON THE FUTURE OF AGRICULTURE

At the recent Labour Party conference, on an executive committee report on the future of agriculture, moved by Mr. Greenwood, approval was given to the principal proposals of both the Scott and the Uthwatt committees, and the report called for a general enabling Act to give the State power to acquire all agricultural land and to lay down the basis of compensation to the owners. The Minister of Agriculture should be empowered to specify the date for the acquisition of particular areas, and, the report went on, "we desire to emphasise that the necessity for the national ownership of agricultural land is too urgent to leave to a very gradual and piecemeal procedure over a long period of years." A land commission, appointed by the Minister, should hold all agricultural land belonging to the State and be responsible to the Minister for its administration, equipment and use, and should help to promote rural development. A State authority should plan home production and the international bulk purchase of imports. Management of prices was part of the process of supply and marketing, and the Ministry of Food should become a permanent part of the national machinery. Distribution should be more orderly and more economical. Other proposals concerned rural housing, agricultural education and research, and the electrification of the countryside. Dr. Haden Guest insisted that the prosperity of British agriculture could be assured by providing for the full nutrition of our people.

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WEEKLY WISDOM

Only the impersonal man, the cautious nondescript who plays safe, makes no enemies, by the simple expedient of making no mark.—C. A. LEJEUNE, *The Observer*.

NOTES AND NEWS

The Editor will be glad to receive items of professional interest for inclusion in these columns.

Good Wishes to all our Readers for Christmas and the New Year

Diary of Events

Dec. 30th.—Whole-day Conference of the Nutrition Society, at the London School of Hygiene and Tropical Medicine, Keppel Street, W.C.1, 11 a.m.

[Attention is drawn to the notice, amended as to Chairman, times of papers, and openers of discussions, appearing in our Forthcoming Meetings column.]

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Publication Delays: The Aftermath of an "Incident"

The Editorial Committee feels that some explanation is called for of the delay in publication of certain important material, the pending appearance of which either has been referred to in these columns, or may justifiably be anticipated by our readers on other grounds. This includes a verbatim report of the Proceedings of the enquiries held by Select Committees of both Houses of Parliament into the Bill promoted by the People's Dispensary for Sick Animals of the Poor, an enlarged number of the *Record* prepared in commemoration of the Centenary of the Royal College of Veterinary Surgeons, and a considerable number of reports of meetings of Council, R.C.V.S., and of meetings of Divisions, N.V.M.A.

With the bulk of this material in their hands our printers have advised us that, in consequence of the inability of some of their staff to return to duty even now following enemy action in the summer, they find it impossible temporarily to keep pace with the work involved additional to the publication of the weekly issue.

We are sure that our readers will share to the full the sympathy felt by the Editorial Committee with our printers in the circumstances in which they find themselves placed, and will extend their indulgence to both in the inevitable delay which must ensue in the publication of the material mentioned, remaining assured that every effort will be made to reduce that period to the minimum. It should be added that the restrictions imposed by Paper Control preclude the possibility of employing alternative means of publication.

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PERSONAL

Veterinarian Air Officer's Appointment as Commandant, London Command, A.T.C.—The Air Ministry announces the appointment of Group Captain Sidney Smith (retired), D.S.O., A.F.C., as Commandant of London Command Air Training Corps, in succession to the late Air Chief Marshal Sir William Mitchell. London Command A.T.C. includes the Metropolitan Boroughs of London and the County of Essex.

Group Captain Sidney Smith, D.S.O., A.F.C., M.R.C.V.S., was born at Lowestoft in 1886 and educated at Lowestoft College. He graduated from the Royal Veterinary College on March 8th, 1907.

As a Territorial officer he was commanding a Howitzer Battery in 1914. He joined the R.F.C. in 1915, serving in France first as an observer and later as a pilot, winning the D.S.O. in 1917, also the Croix de Guerre with Palms.

He subsequently commanded different R.A.F. flying training schools in England, and saw service in Iraq (1924-26) and the Middle East (1926-29), where he was Personnel Staff Officer.

In the past four years he has served as President of an R.A.F. Air Crew Selection Board.

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Forthcoming Marriage.—Runciman—Walker.—The engagement is announced between James Philip Graeme, elder son of Mr. and Mrs. J. G. Runciman, of Howes Close, Sawbridgeworth, and Esther Mahala, only daughter of Mr. and Mrs. J. Walker, of 22, York Avenue, Hunstanton, formerly of Sutton Bridge.

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R.C.V.S. OBITUARY

Brittlebank, Joseph William, C.M.G., M.R.C.V.S., D.V.S.M. (Vict.), Lt.-Colonel late R.A.V.C., Past President of the Royal College of Veterinary Surgeons, of Wimborne Close, Sawbridgeworth, Herts. Graduated N. Edinburgh, December 21st, 1897. Died December 18th, 1944; aged 68 years.

We deeply regret to record that Colonel Brittlebank, to the gravity of whose illness we made reference in our last issue, passed away at his home at six o'clock on Monday morning last. A memoir to this outstanding member of the profession, whose death will be so widely mourned, apears elsewhere in this issue.

Cleary, Michael J., Clondalkin, Co. Dublin. Graduated April 26th, 1886. Died October 29th, 1944.

Mason, Harold Edward Trestrail, Warren House, Bishop's Stortford, Herts. Graduated London, December 14th, 1894. Died December 12th, 1944; aged 73 years.

Wood, Richard B., New Plymouth, New Zealand. Graduated July 16th, 1897. Died July 16th, 1944.

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ROYAL COLLEGE OF SURGEONS AND MEDICAL EDUCATION

Maintenance of an Independent Portal of Entry

Sir Alfred Webb-Johnson, the President, addressing a recent meeting of the Royal College of Surgeons, in commenting on the report of the Interdepartmental Committee on Medical Schools,* said that the report was an extremely valuable document and had assembled some information which should enable right conclusions on this subject to be reached, which did not mean necessarily that the committee itself had reached right conclusions. The Council of the College was rather disposed to quarrel with the Ministry for changing the terms of reference without informing Parliament or the College. It also disliked certain features of the report suggesting that the power of the purse should be used to enforce certain proposals, such as that every medical school should admit women, that the curriculum should be reformed before any additional grants were made for medical education (the reform of the curriculum was entirely an affair of the General Medical Council, which ought not to have pressure brought to bear upon it by a Government Department), that grants to schools should depend on the number of students attaining the degrees of the university, and that the examination fees after meeting all expenses should be devoted entirely to undergraduate assistance. The Council thought that a student who entered a great profession like this should have some proportion of his fee go to the maintenance of a headquarters which would be available to him throughout his career, particularly a headquarters like the College, which provided museum, library, research laboratories, and facilities for meetings. The Council thought that the report placed undue emphasis on academic teaching without proper regard to the value and importance of being trained in the art of medicine and surgery. "Perhaps the thing which concerns this College most intimately, and I hope will concern the whole of the profession, and your great Association, Dr. Dain,† is the tendency towards saying that there should be no other means of qualifying for the profession than university degrees. We contest that very strongly. We regard it as the duty of a great corporation like this, which through the centuries has insisted on a high standard being attained by practitioners of surgery, including a proper standard of practice after qualification, and a proper ethical standard, to maintain a portal of entry into the profession which is entirely under the control of the profession and independent of any subsidised body like a university." (Applause.) The President pointed out that the Royal Colleges had an international significance, with an influence in the Dominions and in British possessions abroad such as no individual university could exert.

The President's remarks were endorsed by the meeting.

* *Brit. med. J.*, December 2nd, 1944.

† Dr. Guy Dain, Chairman of the Council of the B.M.A.

Centenary of Patrick Manson

The centenary of Sir Patrick Manson, "Father of Tropical Medicine" (1844-1922), was marked by a special meeting at Manson House, Portland Place, of the Royal Society of Tropical Medicine and Hygiene. Sir Philip Manson-Bahr (his son-in-law) gave an illustrated address on "The Manson Saga" and (says *The Times*) recounted the remarkable career of the young Aberdeen graduate who emigrated to Formosa in 1865, and in 1894 formulated the mosquito-malaria theory, establishing five years later the London School of Tropical Medicine with the aid of Joseph Chamberlain.

This school has suffered much as the result of this war. The importance of tropical medicine is now greater than ever, and the early rebuilding of the hospital in London becomes the more necessary for the benefit of sufferers from tropical disease as the result of the war in the Far East. It is hoped to found a research scholarship in tropical medicine as an additional memorial. Sir Philip Manson-Bahr appealed for the preservation and extension of Manson's work, and Dr. G. Carmichael-Low spoke of his dying wish for the establishment of a research scholarship. Other colleagues and friends added personal testimonies. Manson's diary, original drawings, and preparations were exhibited.

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COUNCIL OF AGRICULTURE FOR WALES

At a recent meeting of the Council of Agriculture for Wales resolutions were passed urging the Ministry of Agriculture to make compulsory the vaccination of heifer calves against contagious abortion; also that attested beef herds should be included in the Ministry's vaccination scheme.

Still on the subject of livestock improvement, a resolution that the time had come for the taking of energetic action (as visualised in the Agriculture Act, 1937) for the establishment of wide eradication and Attestation areas in Wales, comprising, possibly, whole counties, subject to control measures to prevent infestation from outside, was adopted.

The lack of facilities for the study of veterinary science in Wales was debated at some length. It was decided to approach the authorities with a view to establishing a veterinary college in Wales, and to ask that more adequate facilities be given in the way of scholarships for Welsh-speaking children who wished to train in veterinary science and to practise in the Principality.

Professor Ashby (in the chair) moved a personal resolution that an increase in the supplies of protein for winter feeding was one of the most urgent needs of the livestock industries in Wales.

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Pedigree Aberdeen-Angus cattle have been sold this year in Scotland at an average price of £77 15s. 11d. a head, the total amount realised being £124,707. This was the best average in the history of the breed with the exception of 1920, when 2,073 head averaged £82 16s. 9d.

CORRESPONDENCE

The views expressed in letters addressed to the Editor represent the personal views of the writer only and must not be taken as expressing the opinion or having received the approval of the N.V.M.A.

Letters to the Editor should reach the Office not later than by the first post on Monday morning for insertion in following Saturday's issue.

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GENITAL TUBERCULOSIS IN CATTLE

Sir,—It is with very great interest that I read about Mr. J. Berger's observations on tuberculosis of the genital tract. It is evident from his work, together with that of Steward[1], that a certain percentage of affected animals can be positively detected in clinically healthy cattle. One must wholeheartedly support his suggestion that such animals should be taken under the Tuberculosis Order.

As things are at present, there is not a great incentive to identify the tubercle bacillus, as its presence does not materially alter the prognosis in most cows. Ovarian bursitis was a very frequent accompaniment, and according to my results the breeding outlook is hopeless when the adhesions are bilateral and very poor when confined to one side. Out of a series of 50 animals, four showed clinical signs of tuberculosis in one way or another. On rectal palpation, an impression was gained of an irregular friable thickening adjacent to the ovary, with small nodules breaking away rather readily under the fingers. I wonder if Mr. Berger has encountered this state of affairs and whether he can give us a more detailed description of the findings per rectum in known positive cases? For instance, were tubercle bacilli ever demonstrated from a palpably normal genital tract?

Just 50 per cent. of the animals I have examined with ovarian bursitis had shown a purulent or floccular discharge at one time or another. In ten of the 25 animals there was a history of retained placenta. This suggests that the commonest cause of this condition is an ascending infection from the uterus. Possibly a few of these discharges were tuberculous and had spread down from a prior infection of the Fallopian tubes. The small pinhead spots on the uterine mucous membrane, described by Stamp[2] as the result of a descending, as opposed to a haematogenous, tuberculous infection, would not be palpable clinically.

Tuberculosis is perhaps not quite so prevalent in this area as in Cheshire, and having had negative results for acid-fast bacilli in a few uterine discharges in the past, I gave it up. Mr. Berger has given me, and I hope others, new heart.

Yours faithfully,

7, Redlands Road, Reading. D. N. Spriggs.
December 8th, 1944.

[1] J. S. Steward. (1941.) *Vet. Rec.* **53**. 521.
[2] J. T. Stamp. (1944.) *Vet. Rec.* **56**. 444.

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BRACKEN POISONING IN CATTLE

Sir,—Mr. Fletcher's communication under the above heading in your issue of December 2nd does not include under "Causation" the main source of the condition in this area—in fact, I might say the only cause I have met since the compulsory tillage came into operation here—that is, the eating by cattle of the roots of the freshly ploughed-up bracken. In one outbreak there were 12 two-year-old cattle affected and eight of these succumbed. Of these 12 four showed the laryngitic symptoms and all these cases were fatal. Samples taken from the lesions in the pharynx revealed the presence of *Bacillus oedematis maligni*, and the entry of these secondary organisms was explained by the theory that the coarse fibres of the bracken roots had excoriated the lining of the pharynx and so gave entrance to the organisms contained in the soil on the roots.

This theory is to some extent supported by another case I met where *B. oedematis maligni* was found, causing fatal results, in the pharynx of a heifer. This animal had no access to bracken in any form, but was being fed on beet tailings from a sugar factory. This material contained, together with the fine roots of the beet, a certain amount of soil tare and gritty substances.

Yours faithfully,

Archerstown, Thurles, Co. Tipperary. H. R. Langley.
December 7th, 1944.

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SIX-DAY CHICK DISEASE

Sir,—We have noted with interest the points raised by Mr. W. P. Blount in the issue of December 9th, commenting on our article on Six-day Chick Disease. In reply to his queries:—

1. We pointed out that there are no constant *post-mortem* findings and stated that we considered the presence of unabsorbed yolk-sacs to be coincidental and not by any means specific for the condition under investigation. The incidence of unabsorbed yolk-sacs is not confined to the early deaths, as Blount presumes, but occurs throughout the mortality period.

2. Normal energy metabolism in the fowl is carried out principally by oxidation of carbohydrate. The low fat content of chick rations and the absence of depot fat at the age following the exhaustion of yolk-sac reserves, presupposes that in the absence of available energy of carbohydrate origin, glucogenesis proceeds by deaminisation, the nitrogenous residues being eliminated as uric acid. The greatly increased output of uric acid through this atypical catabolism may impose a strain on the kidney of a week-old chick, which, together with the failing circulation, might well contribute to the macroscopic changes described.

3. The marked activity and restlessness exhibited by the whole group is probably due to hunger, although the chicks have actually filled themselves to capacity, and is exhibited before individuals start to show the typical symptoms of weakness which precede death. We commented in our paper that the length of time between the onset of definite symptoms and death was variable and in most cases was protracted as would be expected in an energy deficiency, when the bird is making a despairing but unavailing attempt to preserve from its inadequate diet a balance of energy metabolism.

4. The abrupt cessation of deaths about the 12th to 14th day is no doubt due to (*a*) the less efficient converters of energy in the group having already died, (*b*) greater food capacity at this age, (*c*) the growth rate of chicks is particularly rapid during the first 14 days and hatching weight during this period is trebled and at this age there may be a phase increase in the metabolic efficiency of the chick due to better physiological organisation or a lower demand for energy per unit live weight increase. It

, as Blount suggests, likely to be due to an increased caecal iciency since the current view which we consider valid, indicates t the bacteriological decomposition of carbohydrate, even in adult caeca, owing to their small size and the relatively rapid sage of food through the digestive tract, only liberates sufficient triment for the requirements of the microorganisms themselves.
5. The death rates in the subsequent experiment when dried ss meal, assayed for carotene and providing as much B-carotene in the experiment Blount quotes, was included for two groups, re such that what appeared to be a protective effect through addition of pure B-carotene in the first instance was later arded as coincidental.
6. The increased mortality resulting from the use of the second ntrol mash, when the only deliberate alteration in the composin was the replacement of 5 per cent. palm kernel cake meal by additional 5 per cent. of millers' offals, was most probably due a deterioration in the quality of the N.F.E. of the millers' offals ich constituted a large part of the mash, due to a more severe raction of "flour" from the cereals. The variability in quality puriness) between successive consignments of war-time millers' als is well known to most stock feeders.
7. In the final experiment the supply of chicks only permitted ups of 44 each, as against 100 in all other experiments. Comred with the control group, between the sixth and fourteenth days, re were only five less deaths in the group receiving 20 per cent. chlorethylene-extracted palm kernel meal, whereas there were 16 deaths in the group receiving 30 per cent. glucose. The ferences between the first two groups cannot be regarded as nificant.
8. We did not state in our paper that there is insufficient metalisable energy to maintain life in a mash containing 30 per cent. weight of ground wheat. On the other hand we pointed out t the unmillable ground wheat used in our experiments was poor quality compared with the pre-war samples and showed, as would expected, *less* protection than glucose, but nevertheless an preciable reduction in mortality compared with the control group.
9. We have purposely avoided quoting food consumption data ce wastage of food from the troughs provides inaccuracies. e mixture containing 30 per cent. of the vitamin concentrate d of wheat germ origin was obviously very palatable and the stibility of the diet was no doubt concomitantly increased. e provision of energy to the chick by 30 per cent. of this parular material could, with a greater food intake and digestibility, re actually provided more available energy than an equivalent ight of whole wheat since their calorific values are very similar.
10. If, as Blount suggests, six-day disease may be due to an amino d deficiency, how does he account for the marked protective ect through the substitution of 30 per cent. of the control mash an equivalent weight of glucose? This addition of pure hexose gar could only have resulted in a reduction in the amino acid ntent of the diet. This appears to us to be conclusive evidence inst his theory. Further, the protective effect of the addition a little cut wheat to chick diets is not likely to be due to the ovision of either glycine or arginine since wheat gliadin conns no glycine and only 3·2 per cent. arginine and wheat glutenin per cent. glycine and 4·7 per cent. arginine. These are the chief proteins of wheat and the replacement of 30 per cent. ntrol mash by an equivalent weight of wheat or ground wheat likely to reduce the glycine and arginine content of the ration ce the protein supplements which are reduced in quantity as sult are much richer per unit of weight in these amino acids.

Yours faithfully,

HAROLD TEMPERTON.
D. W. P. BYTHELL.

tional Institute of Poultry Husbandry and
Harper Adams Agricultural College,
Newport, Shropshire.
cember 15th, 1944.

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STERILISATION OF SYRINGES

Sir,—With reference to the correspondence in *The Veterinary cord* regarding the sterilisation of syringes, the following may of interest.

Prior to the war I was in a dentist's surgery having a tooth racted and observed the dentist had his dental syringe conning the anaesthetic in a stand filled with a white fluid. He ply took the syringe out of the fluid, wiped the needle with a ce of cotton-wool and injected the anaesthetic. When the raction was completed I enquired what the fluid was and was d it was "Solyptol," "one of the best antiseptics for dental rk." I had never heard of the preparation and when I enquired a chemist, neither had he, but would procure it for me. It is Australian preparation containing eucalytus oil in a soluble m. It mixes with water and alcohol in all proportions and es not corrode hypodermic needles or surgical instruments.

Strangely, yesterday, shortly after coming out of the chemists with a bottle of Solyptol, I met a dentist and he enquired what was in my bottle. Upon learning that he was unacquainted with the preparation, I promised to let him have some to try it.

In my experience industrial spirit does not corrode needles—it may be because they are made of stainless steel—and you can keep a "record" syringe assembled with needles always ready for use in a spirit proof case. This is a great advantage when working by candle light or in the country.

Yours faithfully,

The Anchorage, Ardnadam, Dunoon, Argyll. A. HART.
December 8th, 1944.

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THE INSPECTION OF FOOD OF ANIMAL ORIGIN: AN IMPORTANT PART OF THE VETERINARIAN'S DUTIES

Sir,—On reading the Food and Drugs Acts of most of the European countries one is inclined to believe that the authors were commonly influenced by misconception of the valuable role that a veterinary surgeon can play in food control. Admittedly, clinical subjects occupy a big part of his studies, but nevertheless, lectures on meat and food inspection and hygiene are just as important. The old veterinary curriculum emphasised meat inspection in particular, whereas the new one introduced in Poland by Trawinski and in Germany by Ostertag and his school takes into detailed consideration the entire meat processing, hygiene and inspection of all foodstuffs of animal origin. It has to be emphasised that no other academic studies include these subjects in their teaching programmes. The exclusion of the veterinary profession from that sector of public health was mainly due to competition and, may be, also the lack of self-assurance on the part of the veterinarians themselves in their own professional knowledge and rights of this particular subject.

The unsatisfactory distribution of the duties among the interested professions was one of the fundamental mistakes which proved in many countries to be an obstacle in the smooth running of a task so important to public health. Realising this mistake, the Polish Parliament brought a new law into force in 1936 which granted the veterinary surgeon the right to inspect meat already on sale for human consumption. The inspection of game, poultry and fish still remained under the sanitary authorities. This was certainly some progress but still not a final solution to the problem. A much further reaching amendment was published in the same year in Germany. Due to that modern correction the duties of food inspection are divided among three professions, the veterinarians, medical men and chemists, according to their professional knowledge. To the veterinarian belongs the entire inspection of raw and treated meat of all edible warm-blooded animals and the inspection of fish and eggs in shell. The microscopical examination of food of animal origin has to be carried out in veterinary laboratories by veterinary specialists. The most up-to-date food inspection order is the U.S.A. Army Regulation of 1942. It places the veterinary surgeon in charge of the inspection pertaining to meat and dairy hygiene. The inspections apply to all foods of animal origin and have to determine the quality and the sanitary condition of the product as well as the sanitary condition of the establishment or plant in which the foodstuff is produced, prepared, manufactured, stored or handled. According to the Regulation mentioned, the object of that veterinary inspection is primarily the protection of the troops' health against diseases transmitted through spoiled, damaged or contaminated foodstuffs.

By demanding the sole authority to inspect food of animal origin we defend our professional rights and moreover we defend human health and the nation's property.

At present various Allied conferences are being held, all with one goal, the organisation of a prosperous and free world, after the final defeat of German and Japanese aggression. In that great effort the veterinarians can also take an active part in improving professional needs and duties.

Why not start that effort with an Allied conference of veterinary surgeons where other academic professions interested in food questions could participate together with food producers, manufacturers, packers, curers, etc.? Such common debate could render valuable help and draw new lines for an international post-war organisation of the meat trade, food production, hygiene and inspection, to the benefit of all parties concerned.

Furthermore, an Allied veterinary conference should take place as soon as possible to discuss common needs and find proper solutions to problems which are vital for the existence and development of the veterinary profession all over the world.

Veterinary studies should, of course, be revised from a broad international point of view and if necessary new programmes be prepared which would satisfy modern demands, particularly the progress of meat and food hygiene.

By making the food and meat inspection laws throughout the

world uniform, the veterinary profession could do their bit to help the economist in his desire to bring about an easy exchange of international goods. This seems all the more essential as the question of food production and supply has ceased to be a matter of the internal affairs of one State alone, but has become an international problem of fundamental importance for man's existence.

Yours faithfully,

Edinburgh. A. GINSBERG, DR.MED.VET.

November 27th, 1944.

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VETERINARY EDUCATION

Sir,—In your issue of October 28th, 1944, there appears a report of an address on Veterinary Education given to the Lancashire Division by Professor Wright. To certain of the remarks made by Professor Wright one feels constrained to take exception. The statement is made "that the important subject of animal husbandry was in no small measure dominated by an examiner who acted for 46 successive years up to 1937" and that "it cannot be gainsaid that such a state of affairs is likely to have a profound effect on our educational outlook and that the system warrants investigation." From such remarks one gathers that Professor Wright does not approve of long tenure of office by external examiners, even in the case of that gentleman—a gentleman indeed, in very sense of the word—who gave those 46 years of loyal service to the profession and who had the gift of that balanced judgment utterly devoid of hysterical fanaticism which, one submits, is the hall-mark of the successful examiner as well as teacher. Little wonder is it that external examiners are difficult to come by when, in order to press home his argument in favour of what he *personally* considers to be a desirable change in our educational system, a member of the Royal College Council drags in the memory of a deceased gentleman in such a way as to belittle the value of his great contribution to animal husbandry! If indeed there is a danger of an external examiner dominating a subject to its detriment, does not Professor Wright see any danger of the same thing happening in the case of a *teacher*?

Later in his address Professor Wright visualises new veterinary schools as "nurseries for young teachers." Is he satisfied, and is the *profession at large* satisfied that such a "nursery" is a better training ground for teachers than the hard school of experience in the outside world, where a man must satisfy the hardest judges —the animal-owning community—of his competence as a veterinary surgeon before *presuming* to teach others how to practise the art and science of Veterinary Medicine and Surgery.

Still later in his address Professor Wright states that he does not "believe the turning out of practitioners to be the be-all and end-all of veterinary teaching" and that he believes that "the schools will have to concentrate more and more on the production of specialists." Is it possible for a student on graduation to be *anything approaching* a specialist? One would remind Professor Wright that to become a specialist in any subject involves many years of practical experience of and wholehearted application to that subject and that there can be no better basis from which a graduate can specialise than that of competence as a veterinary practitioner.

While one has every confidence that the Council of the Royal College of Veterinary Surgeons (a Council elected by *each* member of the profession *of his own free choice* and not a small, clique nominated by a caucus of members gathered together, perhaps in the small hours of the morning at some obscure rendezvous, as one suspects is the case in connection with the election of officers of other organisations in our midst) will take that line of action in connection with the second Loveday Report which will be best for the future of the profession as a whole and of its individual members both now and for future generations, one submits that any suggestion that students of independent veterinary schools are inferior *in any way* to university undergraduates is a sure sign of an inferiority complex on the part of those who make it. One would conclude by recalling in reply to Professor Wright's Shakespearean quotation that "It is better to be head of the yeomanry than tail of the gentry"—if indeed one can regard as "gentry" those to whom a heap of market benches and a box of matches constitutes the surest road to fame—or ought we to say to "notoriety"?

Yours faithfully,

Royal Veterinary College, HAROLD BURROW.
Streatley, Berks.
December 8th, 1944.

* * * * *

Sir,—In view of the importance of the proposals embodied in the second Loveday Report on Veterinary Education, the Students' Representative Council of the Royal (Dick) Veterinary College held a general meeting of the students in order to incorporate into one report the opinions of the student body put forward at other open meetings.

The following were the main points decided upon at the meeting, by overwhelming majorities:—

1. "That this meeting recommends that veterinary education be undertaken by the universities provided that *all* veterinary colleges be given *full* faculty status within the appropriate universities."

During the discussion on this proposal it was strongly emphasised that the Royal (Dick) Veterinary College and the Royal Veterinary College must not be allowed to remain outwith the universities if the other veterinary schools became faculties within their respective universities. It was felt that were these two colleges to remain independent schools, an undesirable distinction between university and college graduates would arise. This difference in status would make these two colleges less attractive to prospective veterinary students with a consequent decline in the numbers attending them.

In order to reap the full benefits of university education and to maintain our professional independence, *full* faculty status *must* be given to all veterinary schools. Under *no* other circumstances can mergence with the universities be visualised.

2. "That this meeting does not see the necessity for founding new veterinary schools and considers that any increase in the required number of graduates can be better accommodated by enlarging the existing schools."

We believe that the expenditure recommended in the Loveday Report for the founding of two new schools, could be more profitably spent by enlarging the facilities of the existing schools. Experience shows that teaching can be most satisfactorily carried out, in any one subject, by a professor having at his disposal a group of lecturers, each a specialist in a particular branch of that subject. The suggestion that veterinary schools should be on a 30-graduate basis would render this form of teaching economically impossible. This would be increasingly obvious when the demand for veterinary surgeons drops and the numbers attending the schools fall correspondingly.

It is considered that a faculty of 150 students is too small to command sufficient recognition within its university.

3. "That this meeting approves the suggestions laid down in the Loveday Report as to the conducting of examinations."

As all veterinary schools would be faculties within universities the diploma examinations of the R.C.V.S. would be dropped.

Yours faithfully,

J. R. R. LEACH,
Hon. Secretary, Students' Representative Council.

Royal (Dick) Veterinary College, Edinburgh, 9.
December 6th, 1944.

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VETERINARY ASSISTANTS

Sir,—During the period 1939-41 the supply of veterinary surgeons exceeded the demand, with the result that conditions offered to assistants were anything but encouraging. Several of the newly qualified offered their services for a nominal salary and board. Others were offered from two to four guineas per week and board. Many were obliged to accept any sort of work, or continue to live on their parents for a few more months.

The assistant was prepared to accept any conditions just to have a job. He found himself the least considered of the veterinary establishment: the lay staff—*i.e.*, grooms, kennelmen and office staff—being much more difficult to replace than assistants, were handled with respect, every effort being made to assure them each week-end off and an annual holiday. The assistant was just there to work.

At present, assistants, being difficult to obtain, are in demand and conditions offered have, naturally, improved. Salaries are more like what they should always have been. In quite a few advertisements for assistants we even find the word "leisure" creeping in—a word certainly never thought of four years ago. It is good to see these changes.

It may be that, very soon, our colleagues in the Forces will return to civil life. They will require jobs and there may be again, a surplus of assistants. In appreciation of what these men have done for us let us hope they will be offered conditions as they are now, or better ones—and not those which often showed themselves during 1939-41.

It is claimed by some that there is another side to the question: that practitioners were hard up during the period mentioned and often employed assistants out of sympathy. I regret these claims do not impress me at all.

Yours faithfully,

Fieldhead, Whickham, J. E. JOHNSON.
Newcastle-upon-Tyne.
September 5th, 1944.